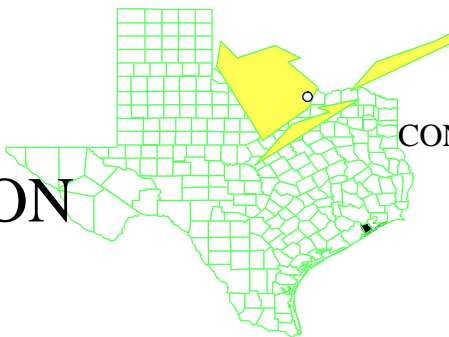


TEX TIN CORPORATION TEXAS

EPA ID# TXD062113329

Site ID: 0602105



EPA REGION 6
CONGRESSIONAL DISTRICT 09
Galveston County

Other Names:
Gulf Chemical Metallurgical

Updated: 04/13/05

Site Description

Location:

- The Tex Tin site is located in a mixed industrial/petrochemical/residential area at the intersection of State Highway 146 and FM 519 in Texas City, Galveston County, Texas.
- The site is approximately 10 miles north of Galveston, Texas, and the City of LaMarque is located approximately 1/2 mile northwest of the site.

Population:

- An estimated 25,000 people live within a three-mile radius of the site.

Setting:

- Tex Tin is an inactive tin and copper smelter.
- The 170-acre site contains numerous waste handling or disposal areas, including five waste water treatment ponds, open and closed acid ponds, slag piles, an inactive (permitted) landfill containing low level radioactive wastes, and an inactive hydrocarbon recovery facility (Morchem).
- Industrial waste disposal facilities and marsh areas are located south and southwest of the site.

Hydrology:

- The shallow Chicot Aquifer is comprised of interbedded sedimentary deposits of sand, gravel, silt and clay, and extends from about 60 feet to about 1,000 feet below the site.
- The Chicot aquifer is overlain by shallow transmissive zones which are not utilized for drinking water supplies.

Wastes and Volumes

Surface Soils

- Surface soils have been impacted by constituents released at site.
- Major contaminants identified are arsenic, cadmium, chromium, copper, lead and nickel.
- Radionuclides and low-level gamma radiation above background levels have been detected.

Subsurface Soils

- Subsurface soils (generally in the upper 2 to 5 feet) have been impacted by site activities.
- Major contaminants identified were arsenic, cadmium, chromium, copper, lead and nickel.

Former Acid Ponds

- Fill and sediment in ponds exceed background concentrations for various inorganic constituents and have a low pH.
- Radionuclides above background levels, and volatile organic compounds, were identified in some of the former ponds.

Slag Piles

- Piles have high concentrations of inorganic constituents.
- Several piles were identified that had high levels of gamma radiation and levels of radium-226 above background.

Ground Water

- Shallow transmissive zone has been impacted by site activities. Inorganic constituents (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, mercury, nickel and selenium) and several organic constituents exceed maximum contaminant levels (MCLs) and up gradient ground water concentrations. Radium-226 and radium-228 exceed MCLs in some shallow ground water samples.
- Medium transmissive zone has been impacted by inorganic constituents to a lesser degree than the shallow transmissive zone. Concentrations of various inorganic constituents exceed MCLs.
- The deep transmissive zone appears to have little impact with low levels of contamination with some inorganic constituents slightly above MCLs.

Site Assessment and Ranking

NPL LISTING HISTORY

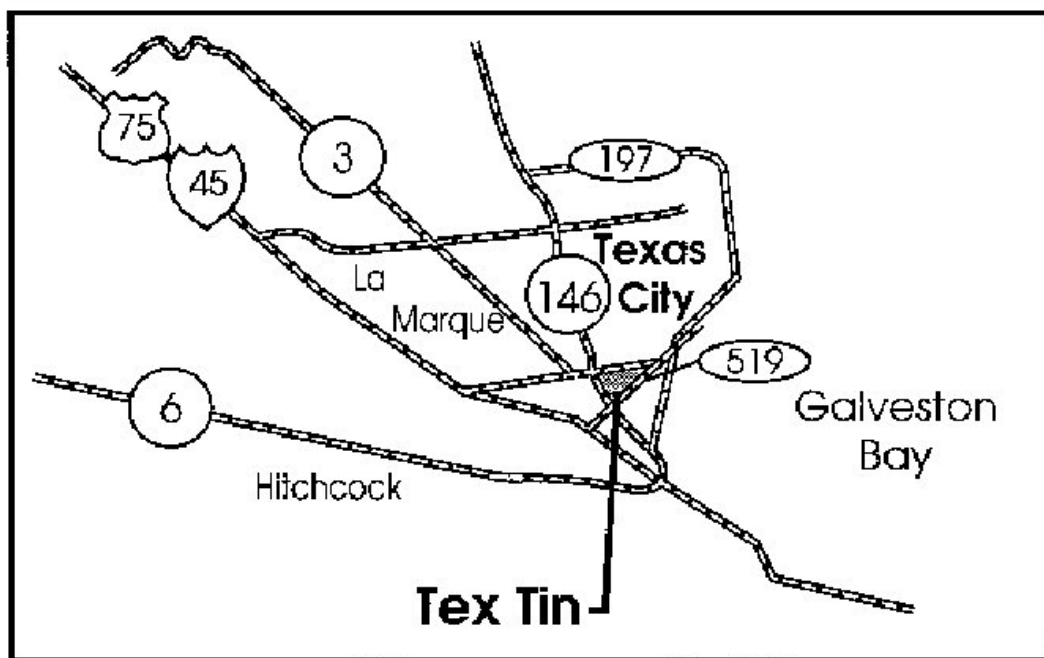
Site HRS Score: 50.00

Proposed Date: 6/17/96

Final Date: 9/18/98

NPL Update: Vol. 63 No.181

Site Map and Diagram



The Remediation Process

Site History:

- The site was originally developed as a tin smelting operation by the U.S. Government during World War II. Wah Chang Corporation bought the site after the war and sold it in 1970 to Associated Metals and Minerals which operated the site under the name of Gulf Chemical and Metallurgical Company until 1984, when the name was changed to Tex Tin Corporation.
- Tin was processed at the facility from 1941 until 1989; secondary copper smelting began in 1989. All smelting operations ceased in April 1991.
- In 1969 AMOCO Chemical Co. purchased about 27 acres on the eastern portion of the site.
- Amoco Chemical Company and Tex Tin Corporation entered into an Administrative Order on Consent in 1990 to perform a Remedial Investigation and Feasibility Study (RI/FS).
- The RI field work was concluded in August 1992, and development of the RI report, the Risk Assessment report, and the FS report began. The RI report was finalized in August 1993. Amoco did not complete the FS report.
- Tex Tin Corporation challenged the NPL listing in Federal Appeals Court. Oral arguments were presented May 23, 1991.
- On June 14, 1991, the Court issued its determination that EPA had not provided sufficient information to support the conclusion made in the HRS package that arsenic could reasonably be released from waste piles.
- The Court remanded the NPL listing to the Environmental Protection Agency (EPA) for

- "a reasoned explanation" of why arsenic is likely to be released from the waste piles.
- A hearing on the NPL listing status was held on April 5, 1993. On May 11, 1993, The U.S. Court of Appeals for the District of Columbia Circuit ordered Tex Tin deleted from the NPL.
- In a June 18, 1993, letter from EPA to the Texas Natural Resource Conservation Commission (TNRCC) now the Texas Commission on Environmental Quality (TCEQ), the site was referred to the TNRCC. TNRCC subsequently designed a special study to collect data to evaluate the site under the federal Hazard Ranking System (HRS).
- TNRCC completed the special study and submitted the results to EPA as a draft HRS documentation record. In a letter dated October 5, 1994, TNRCC requested EPA to evaluate the Tex Tin site for re-proposal on the NPL.
- The Tex Tin site was re-proposed to the NPL in June 1996. The Tex Tin site was finalized on the NPL on September 18, 1998.

Health Considerations:

- Potential human exposure risks include inhalation of particulate from site soils, incidental ingestion of sediments, soils, and shallow ground water, and dermal contact with soils.
- Inorganic constituents released at the site have impacted the surface soils, subsurface soils and ground water.
- All wells within a 1-mile radius of the site are completed in deeper aquifers where contamination has not been identified.

Other Environmental Risks:

- There is low-level radioactive material buried in a permitted landfill. Radionuclides and low-level gamma radiation were detected on the site during the Remedial Investigation.
- Low pH water is leaving the site to the south through Wah Chang ditch.

Records of Decision

Record of Decision for OU No. 1 May 17, 1999
Amended Record of Decision for OU No. 1 September 28, 2000
Record of Decision for OU No.3 September 29, 2000
Record of Decision for OU No. 2 September 27, 2001
Record of Decision for OU No. 4 September 27, 2001

Ready for Reuse Determinations

The Program's first Superfund Ready for Reuse Determination was signed for the Tex Tin site operable unit no. 2, on July 1, 2003. A public ceremony was held in Texas City with the EPA Region 6 Regional Administrator, the Mayor of Texas City, TCEQ, and the PRP, BP Amoco. The determination declares that BP Amoco's cleanup of operable unit 2 was successful and ensures that the environmental conditions on this property are protective of its anticipated future use as an industrial property.

The second Ready for Reuse in Region 6, was announced for the Tex Tin site's operable unit 1 on December 3, 2003. The determination clears the way for redevelopment of the largest and most contaminated portion of the NPL site. A Redevelopment steering committee headed by the City of Texas City is studying options for industrial use.

The Tex Tin site was awarded one of the first Superfund Redevelopment Initiative grants in September, 2000 to study uses for the cleaned up property.

Community Involvement

- Community Involvement Plan: Developed 8/90
- PUBLIC EVENTS, Open houses and workshops: 4/90, 5/90, 6/90, 9/98, 3/99, 3/2000, 8/2000, 1/2002, 11/2002, 7/2003, 12/2003(completion).
- Proposed Plan Fact Sheet and Public Meeting: 9/98, 3/2000, 7/2000
- ROD Fact Sheet:
- Milestone Fact Sheets: 8/88, 5/90, 6/90, 9/90, 12/90, 2/91 (by PRPs), 5/00, 1/02, 11/02, 7/03, 12/03.
- Constituency Interest: The site in February, 2004 was nominated as a model for Superfund Collaboration in Region 6. There is a high level of site interest by local and elected officials to return the site to productive use for the community. Residents were primarily concerned with airborne dust contaminants and off-site migration of contamination from storm water runoff; site is located in a heavily industrialized area. There are 152 citizens on site mailing list.
- Site Repository: Moore Memorial Library, 1701 Ninth Avenue North, Texas City, TX 77590

Technical Assistance Grant

(No TAG has been awarded for this site)

- Availability Notice: 9/89, Re-advertised 8/90, 7/24/99; 5/28/00
- Letters of Intent Received:
 - 1) 12/2/89 - Tex Tin Area Citizens Group - LOI withdrawn 8/90
 - 2) 2/28/92 - Environmental Protection Advisory Group - 12/92, no application received
 - 3) 8/26/99 - Lee Subdivision Homeowners Association - final application on 10/13/99. Application was deficient and needed corrections. Application rejected on 4/00.
 - 4) 7/19/99 - RESPECT did not send in TAG application.
 - 5) 8/26/99 - Lee Subdivision Homeowners Association - asked for extension 9/10/99; sent in application 10/13/99.
 - 5) 5/3/00 - RESPECT Committee - no final application received
- Grant Award: None.

Contacts

- **Remedial Project Manager (EPA):** Carlos Sanchez, 214-665-8507, Mail Code:6SF-A
- **Remedial Project Manager (EPA):** Philip H. Allen, 214-665-8516, Mail Code: 6SF-AP
- **On Scene Coordinator:** Warren Zehner, 281-983-2229, Mail Code; 6SF-R2
- **EPA Region 6 Regional Public Liaison:** Arnold Ondarza, 303/312-6777
- **State Contact:** (TCEQ) Alvie Nichols, 512/239-2439, Mail Code 143
- **Community Coordinator (EPA):** Donn Walters, 214-665-6483, Mail Code: 6SF-PO
- **Attorney (EPA):** Pam Travis. 214-665-8056, Mail Code: 6RC-S
- **State Coordinator (EPA):** Karen A. Bond, 214-665-6682, Mail Code: 6SF-AP
- **EPA Contractor:** CH2M Hill

Enforcement

- One Hundred thirty (130) Potential Responsible Parties (PRPs) have been identified for the site.
- Administrative Order on Consent was signed on March 30, 1990 with site PRPs to conduct the remedial investigation (RI) and feasibility study (FS). Only the RI was conducted.
- A consent decree between EPA and the PRP group, including Federal PRPs, was lodged in May 2000. The consent decree included all four operable units. The PRPs agreed to conduct the remedial design and remedial action for OU No. 1, the former smelter facility, and fund the remedial design and remedial action for OU No. 4, the Swan Lake Salt Marsh area.
- The court approved the consent decree between EPA and the PRP group in August 2000.

Present Status and Issues

- In June 1998, Amoco completed cleanup activities for Parcel H (Amoco Property) of the Tex Tin site. Parcel H has been designated as Operable Unit No. 2 of the Tex Tin site.
- The Tex Tin site was finalized on the NPL on September 18, 1998.
- EPA released the Proposed Plan for the industrial site, Operable Unit No. 1, on September 9, 1998. The initial 30-day public comment period ran from September 9, 1998, through October 9, 1998. A request to extend the public comment period was submitted and the comment period was extended an additional 30 days and ended on November 9, 1998. The Record of Decision (ROD) for the facility, Operable Unit No. 1, was signed by the Regional Administrator on May 17, 1999.
- Removal activities for the residential removal action in LaMarque, Texas, started in March 1999 for Operable Unit No. 3 of the Tex Tin site. The residential removal action was completed at the end of June 1999.
- As a result of negotiations with a group of PRPs, EPA amended the remedy selected for OU No.1. The Amended Proposed Plan was released to the public on March 7, 2000. EPA conducted the 30-day public comment period from March 7, 2000 through April 5, 2000. During the public comment period, EPA held a public meeting on March 23, 2000 to receive oral and written comments from the community. The EPA signed the Amended ROD for OU No. 1 on September 28, 2000.
- The EPA signed the ROD for the residential properties, OU No. 3 on September 29, 2000.
- The Proposed Plan public comment period for OU No. 4, the Swan Lake Salt Marsh area, ran from April 13, 2001, through May 21, 2001. A public meeting was held in Texas

- City, Texas, on April 26, 2001. The EPA signed the ROD for OU No. 4 on September 27, 2001.
- The Proposed Plan for OU No. 2, Amoco property, ran from July 27, 2001, through August 27, 2001. A public meeting was held in Texas City, Texas, on August 9, 2001. The EPA signed the ROD for OU No. 2 on September 27, 2001.
 - In September 2000, Texas City received a \$100,000 Superfund Redevelopment Grant to develop reuse options for the former smelter site. EPA and the PRPs are working with Texas City during the remedial design and remedial action phases of the project to ensure that development options are maximized.
 - Operable Unit (OU) No. 1 encompasses approximately 140 acres and includes the former smelter facility. The Amended Record of Decision (ROD) for OU No. 1 was signed on September 28, 2000. The EPA, the State of Texas, and Natural Resource Trustee, signed a Consent Decree with the Potentially Responsible Parties (PRPs, private and Federal) for the site. The Consent Decree was entered by the court on August 4, 2000, and addressed the four OUs for the site and natural resource damages. The Phase II remedial action commenced on January 14, 2002, and the final construction inspection was conducted on November 18, 2003. The EPA, the TCEQ, and Texas City signed the Superfund Ready for Reuse Determination on December 3, 2003. EPA plans to approve the Remedial Action (RA) Report in September 2004. EPA worked with the Texas Department of Transportation for the disposal of contaminated soils encountered during road construction for the expansion of SH 146 adjacent to the Tex Tin site. Construction activities started in January 2004 and were completed in August 2004.
 - OU No. 2 consists of Parcel H (Amoco property, now BP Amoco) and occupies approximately 27 acres. Amoco completed a response action for this area in June 1998 under the State's Voluntary Cleanup Program. A No Further Action ROD for OU No. 2 was signed on September 27, 2001. A Notice of Intent to Delete OU No. 2 from the National Priorities List (NPL) was published in the Federal Register on August 15, 2002. The NPL deletion for OU No. 2 became final on October 15, 2002. On July 1, 2003, EPA, TCEQ, and Texas City signed the first Superfund Ready for Reuse Determination for OU No. 2.
 - OU No. 3 consists of the residential area located approximately 2000 feet west-northwest from the Site in La Marque, Texas. EPA signed an Action Memorandum for removal of arsenic contaminated soil in September 1998. EPA's residential removal action was completed on June 2, 1999. Based on EPA's removal action, a No Further Action ROD was signed for OU No. 3 on September 29, 2000.
 - OU No. 4 is the Swan Lake Salt Marsh area along the former discharge channel of the Wah Chang ditch located between the current Hurricane levee and Swan Lake. EPA signed the ROD for OU No. 4 on September 27, 2001. EPA received funding from the PRP Group (private and Federal) to conduct the remedial design and remedial action for OU No. 4. Through an Interagency Agreement (IAG), EPA contracted with the Corps of Engineers, Galveston District, to conduct the remedial design and remedial action with EPA oversight. In February 2002, EPA contracted with the Corps of Engineers, Galveston District, to conduct the remedial design for Tex Tin OU No. 4, the Swan Lake Salt March area. The Remedial Design was completed in October 2002. EPA approved the Remedial Design and Technical Plans on January 8, 2003. The contractor for the Corps of Engineers completed the field construction work on January 5, 2004. EPA and the Natural Resource Trustees conducted the Final Inspection for OU No. 4 on January

27, 2004. EPA approved the Remedial Action Report on April 27, 2004.

- The EPA Region 6 achieved Construction Completion at the Tex Tin Corporation Superfund Site with the signing of the Preliminary Closeout Report on September 20, 2004. The cleanup activities for the former smelter facility, OU No. 1, were conducted by a group of private and Federal potentially responsible parties (Settling Defendants) with EPA oversight. The cleanup was performed at a savings of approximately \$10 million and completed approximately eight (8) months ahead of schedule. The cleanup for OU No. 4 was conducted by EPA with funding provided by the Settling Defendants. The cleanup of OU No. 4 was performed at a savings of approximately \$3million.

Benefits

- Cleanup of site contaminants would address the threat of potential site and off-site contamination to public health (workers/community) and the environment (ground water and surface water). A minority community is located approximately 2,000 feet from the site and approximately 3,500 people live within a mile radius of the site. Addressing the source contamination would prevent future migration of site contaminants to the shallow ground water. After site remediation of OU No. 1, approximately 100 acres could be used for future industrial/commercial development.
- The cleanup in the residential areas was conducted to meet residential health standards so that these areas can continue to be used for residential purposes.
- Completion of cleanup activities for OU No. 4 will provide protection to the ecological system for the Swan Lake Salt Marsh area and prevent potential releases of contaminated sediments to the environment.
- The Tex Tin property has been purchased by a development company that will use the site as a container facility to support the proposed Texas City megaport facility which will cost more than \$600 million and add nearly 2,000 direct and indirect jobs to the area.